



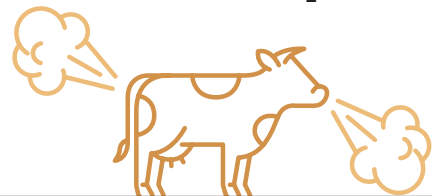
How to eat healthily for the planet and for your body

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Do you know that the production of food produces CO₂? Different foods produce different amounts of CO₂. This article compares different types of food and suggests how all over the world, people could choose a more healthy diet that also produces less CO₂ and therefore helps to tackle the Climate Emergency.

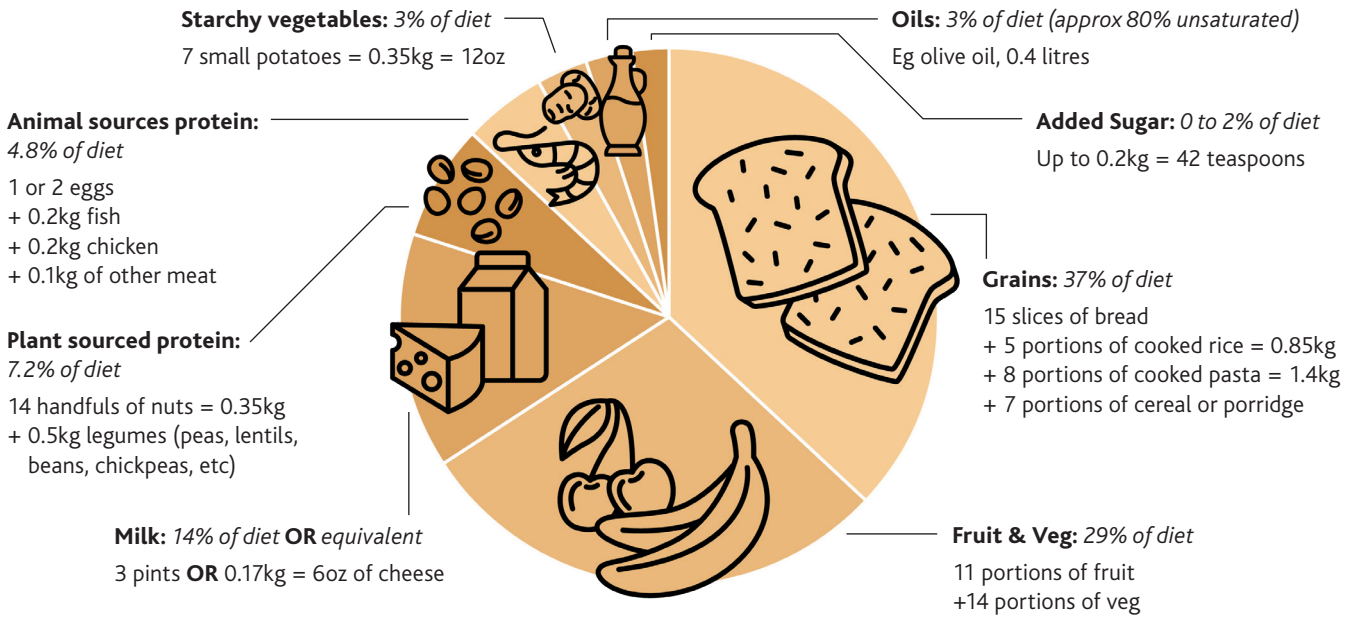
Producing food and getting it to the consumer is high among the major sources of carbon pollution. Mike Berners-Lee, author of the book "There is no Planet B" says that by his analysis a few years ago food production accounted for 20% of greenhouse gases. A more recent analysis reckons that food accounts for about a quarter of greenhouse gases.

Sheep and cattle emit methane when they burp and fart which is more damaging than CO₂.



With a view to quantifying where the pressure needs to be put to change this, a "diet" has been compiled by The EAT Lancet Commission. This involved 37 leading scientists from 16 countries in various disciplines including human health, agriculture, political sciences and environmental sustainability, to develop global scientific targets for healthy diets and sustainable food production. It is the first attempt to set universal scientific targets for the food system that apply to all people and the planet. A practical example of the weekly diet is pictured on the next page giving percentages by weight of different foods.

Weekly menu



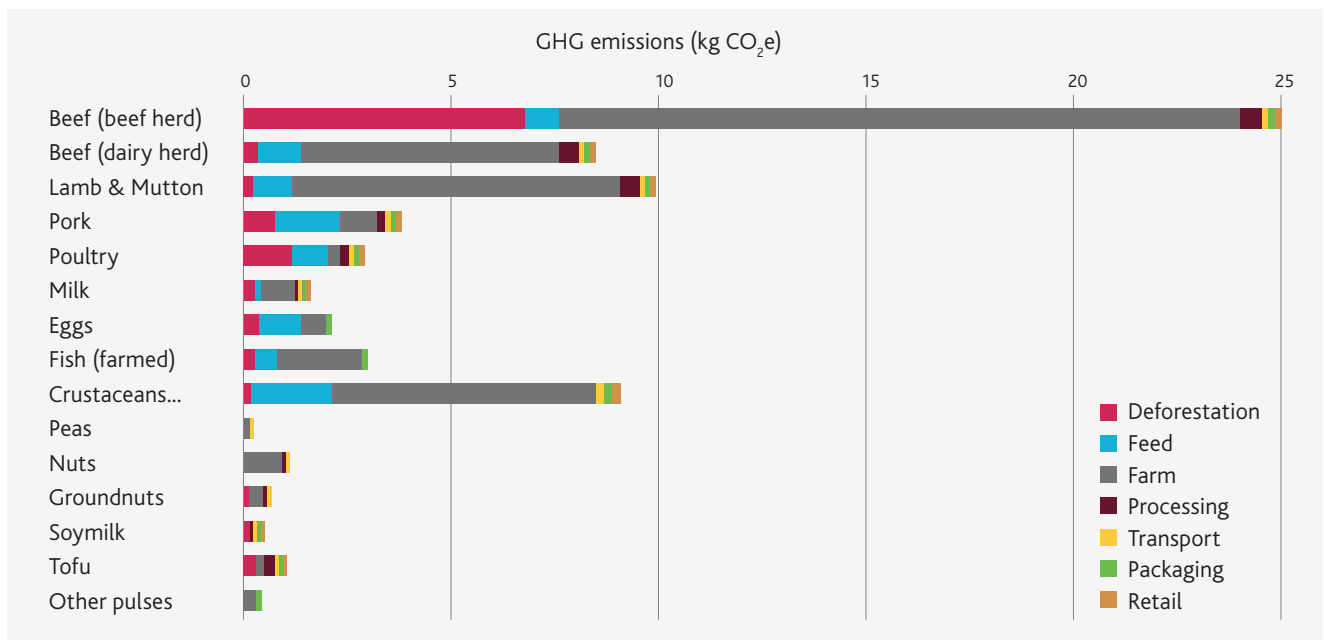
Notice that plant sourced protein is a higher % of the diet than animal sourced protein.

Below is a picture of the carbon pollution, in kilograms of CO₂ equivalent, that are released in the process of providing a mere 50 grams (about 2 ounces) of protein.

The impact of beef as a food source is glaringly obvious. To obtain the typical daily protein requirement of just 50 grams (about 2oz) from beef, the equivalent of a massive climate-wrecking 25 kg

(55lbs) of greenhouse gases (equal to about 75 miles in a petrol car) are released. Dairy, lamb and farmed crustaceans are pretty bad too. Notice that all of these have a large contribution labelled "farm" (in grey). For sheep and cattle, this is mostly due to the methane they emit as burps and farts, which because it is 28 times more damaging per kg than CO₂, creates the high CO₂ equivalent. At the other end of the scale, legumes and nuts release just 1kg CO₂ or less, so it's easy to see why the EAT diet prefers these protein sources. They are healthier too since they contain less saturated fat.

kgCO₂e per 50g protein



^ Graph courtesy of Mike Berners-Lee, data from Poore, J. & Nemecek, T. Reducing food's environmental impacts through producers and consumers. 992, 987–992 (2018)

Recent analysis reckons that food accounts for about a quarter of greenhouse gases.



Berners-Lee reckons that the world's grown food equates to 5940 calories per person per day. He also estimates that 1740 calories (30%) of this is fed to animals and in addition, they consume 3810 calories from pasture bringing their total calorie consumption to 5550 per day. In return they only supply 590 calories for human consumption, so animals are only 11% efficient at creating food for us with most of their calorie intake spent keeping themselves warm, moving about etc.

As a result, 77% of the world's farmland is feeding animals to produce just 24% of human daily food requirement.

Even so, at first sight the 3810 calories from pasture appears not to be a problem because humans cannot digest grass, but the conversion of forest to pasture is releasing huge amounts of greenhouse gases which contribute significantly to the ongoing Climate Emergency. Just look at what is happening in Brazil, where farming interests are ripping out the world's greatest "green lung" to farm cattle or grow soya to feed cattle. In the UK we cleared our forests to make pasture centuries ago and we should now be converting pasture to forest and peat to compensate.

So, now you know what kind of diet can help reduce global warming, perhaps you might sit down and note the foods that you eat at the moment.

Could you change your eating habits to become closer to the EAT Lancet diet above?

What are the implications of eating less beef and lamb in the UK?

How might farmers change what they grow?

Glossary

CO₂e = CO₂ equivalent - That is, taking account of other gases such as methane (CH₄), which is about 28 times more potent than CO₂ in causing global warming.

Legumes - beans, peas, soya, chickpeas, etc.

Article links

For more detail on the EAT Lancet planetary diet, follow the link:

https://eatforum.org/content/uploads/2019/07/EAT-Lancet_Commission_Summary_Report.pdf

There is No Planet B by Mike Berners-Lee

<https://www.theguardian.com/environment/2020/oct/05/amazon-near-tipping-point-of-switching-from-rainforest-to-savannah-study>

Additional information

In the early 1800s, CO₂ made up about 280 parts per million (ppm) in the atmosphere. Today it is over 400ppm.

About the author

As an engineer, I worked on fighter aircraft, satellites and large commercial aircraft, visiting many countries on business. As a project manager, I had charge of building a new business from green fields. Upon retirement, I studied climate change and decided I should do something about it. My interests are wide and include playing jazz saxophone, rambling and badminton.

